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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,056	05/04/2001	Wilfried Merkel	1535	1161

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EXAMINER	
COLE, LAURA C	

ART UNIT	PAPER NUMBER
1744	

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,056

Applicant(s)

MERKEL ET AL.

Examiner

Laura C Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7 and 8 is/are rejected.
- 7) ☒ Claim(s) 3,6 and 9-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 1-11 are objected to because of the following informalities:

Claim 1 recites "...wherein the drive shaft includes a base body made from an extruded light metal profile and *via* connection part..." is somewhat confusing. Does applicant intend "...wherein the drive shaft includes...and a connection part..."
Appropriate correction is required.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berge et al., USPN 5,699,582 in view of Zackrisson, USPN 4,527,978.

Berge et al. disclose a locking and sealing washer apparatus that comprises a drive shaft (12) fastened to a crank (Column 2 Lines 46-69) and a connection part (38) that has a screw thread (See Figure 4 inner portion of (38)) and a polygonal slaving profile (Figure 4 outer portion of (38)). Berge et al. do not disclose a specific material for comprising the drive shaft or for the connection part.

Zackrisson provides a teaching of strengthening an aluminum (light metal) drive shaft (12; Column 2 Lines 3-6) at a portion (24) to a heat treated (harder metal) connection part (14) in order to carry a requisite workload (Column 2 Lines 31-36).

It would have been obvious for one of ordinary skill in the art to modify Berge et al. by providing the shaft to be manufactured from a light metal and the connection part

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to be manufactured from a harder metal based on the teaching of Zackrisson that a shaft can be manufactured inexpensively by employing a harder metal on a critical portion of a shaft and the remainder of the shaft can be made of a less expensive lighter metal.

3. Claims 1, 4, 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neufeld, USPN 2,714,739 in view of Zackrisson, USPN 4,527,978.

Neufeld discloses an assembly for vehicle windshield cleaning systems that comprises a drive shaft (31) that is fastened to a crank (37) and a connection part (53) that has a screw thread (54) and a polygonal slaving profile (61). The base body has a conical protrusion (32) onto which the connection part is placed and is joined by "press-fitting" the connector into assisted by the threaded portion (Figure 3). The connection part is seated on the longitudinally fluted protrusion (32). Also disclosed is at least one longitudinal conduit (34, 55, 59). Neufeld does not disclose a specific material for comprising the drive shaft or for the connection part.

Zackrisson provides a teaching of strengthening an aluminum (light metal) drive shaft (12; Column 2 Lines 3-6) at a portion (24) to a heat treated (harder metal) connection part (14) in order to carry a requisite workload (Column 2 Lines 31-36).

It would have been obvious for one of ordinary skill in the art to modify Berge et al. by providing the shaft to be manufactured from a light metal and the connection part to be manufactured from a harder metal based on the teaching of Zackrisson that a shaft can be manufactured inexpensively by employing a harder metal on a critical

portion of a shaft and the remainder of the shaft can be made of a less expensive lighter metal.

Allowable Subject Matter

4. Claims 3, 6, and 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the prior art above or mentioned below provides a teaching for a connection part cast with the base via an adapter piece, the base and connection part or the crank are chemically nickel-plated, or wherein there is a region on the base body with fluting where the crank of a harder material is cast with a connecting layer of zinc.

USPN 6,558,066 to Zimmer does not disclose a drive shaft having a cylindrical screw thread on its free end in the region of a fastening part and that a connection piece made from harder material is *fixedly connected* with the base body.

Applicants Arguments

5. In the response filed 03 November 2003, the Applicant contends that:

A. Zimmer does not disclose a drive shaft having a cylindrical screw thread on its free end in the region of a fastening part and that a connection piece made from harder material is *fixedly connected* with the base body.

B. Berge et al. fails to provide a base body that is made from an extruded light metal and is fixedly connected with a connection part made from a harder material which includes a screw thread.

C. In Berge et al. the connecting part is not the nut (38) but the portion (32).

D. Neufeld provides no suggestion of a drive shaft with a light metal profile and a connecting portion of a harder metal.

Response to Arguments

6. Applicant's argument A, see the Remarks, filed 03 November 2003, with respect to Zimmer have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejection of Zimmer has been withdrawn.

7. Applicant's arguments B and D with regards to the light metal drive shaft and harder metal connecting portion, see Remarks, filed 03 November 2003, with respect to the rejection(s) of claim(s) 1, 2, 4, 5, 7, and 8 under Berge et al. or Neufeld have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Zackrisson, USPN 4,527,978.

Furthermore, it is well known to manufacture articles from two different metals based on requirements of working portions and the costs involved. For example, most pencils use a metal crimp to attach an eraser to a pencil made of wood. It is rare to find a pencil made of one unitary metal piece. It is inherently less expensive to make the crimp portion and handle portion from two different materials. Or most pens have a portion of elastomer grip to create friction between a hand and the pen where it is held rather than manufacture the entire pen from the soft elastomeric portion. There are numerous household and everyday products that are made of multiple portions solely based on function and cost.

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8. Applicant's argument C filed 03 November 2003 have been fully considered but they are not persuasive.

Berge et al. does in fact comprise a "connection part" which is the nut (38) as far as the structure is claimed. Applicant states that "32" may also be a "connection part" as well. However, both pieces serve to connect a wiper arm to a drive shaft.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1300.

LCC
LCC

15 December 2003

Robert J. Warden, Sr.
ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700